



ROLE OF COMMUNICATION IN EFFECTIVE HEALTH CARE DELIVERY - A CRITICAL LOOK AT HEALTH CARE PRACTITIONERS' PERSPECTIVE

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ABSTRACT

Communication is the basis of human activity. Every activity of humans is a result of intrapersonal or interpersonal communication. Interpersonal communication becomes even more important in case of group tasks. Health care is one such activities where all stakeholders have their own distinctive roles to play. The outcome of a treatment depends on the effective performance of each one's role which in turn depends on the quality of communication between them. This paper looks at the perception of doctors regarding the efficiency of communication systems at government hospitals in Kerala. The analysis of survey data collected from 240 doctors across Kerala indicated that 'openness of communication', especially between doctors and nurses as well as within doctors and nurses and 'commonly understood emergency communication procedure' are very vital in ensuring communication effectiveness at hospitals. Moreover, while there was a slight difference in opinion of doctors belonging to different age groups regarding the first factor, all the respondents had a unanimous view regarding the importance of commonly understood emergency communication procedure.

KEY WORDS: effective communication, Patient satisfaction,

I. INTRODUCTION

Communication is the basis of any human activity. Every action of a human being is generally the result of a communication. It may be initiated by an interpersonal communication involving the words or deeds of another person or by an intrapersonal communication within a person. Irrespective of whether it is interpersonal or intrapersonal, the role of communication as a prelude to action remains unquestionable. The significance of communication gets further magnified in case of collaborative tasks where the final outcome is more or less determined by the extend of synergy among the people performing the tasks. Health care delivery is a domain where teamwork cannot be by-passed under any circumstance. Right from the point where the patient reaches till the complete recovery of the patient across various stages, there exists teamwork involving various stakeholders like doctors, nurses, attendants, bystanders and even the patients. The effective and speedy care delivery will result only from a well-coordinated team effort of the parties involved in the patient care process. Each one's role here is complementary in nature and can be fulfilled only through open and effective communication. Even a slightest miscommunication or for that matter a delayed communication may have far reaching consequences including the life of an individual. As such, we cannot afford to permit the slightest misunderstanding to creep-in in the health care delivery process and there must be utmost clarity in communication especially between doctors, nurses and attendants who are the key stakeholders in patient care process. This is even more important in case of government hospitals where the doctors, nurses and other stakeholders will have to act within an extremely short span of time considering the quantum and variety of patients arriving there daily. Hence, this paper looks at the effectiveness of communication system existing at government districts hospitals in Kerala as perceived by the doctors working there.

II REVIEW OF LITERATURE

Communication in health care serves various purposes. It is most important to solve problems. Patient's problems can be understood more easily with clear and precise interaction between doctor and patient. Once the problems are understood, through communication, there will definitely be a considerable fall in anxiety (Amir & Yunus, 1999).

A number of studies offer sizeable evidence on the relation between communication and outcome measures like satisfaction of both doctor and patient, compliance and health improvement etc. (Wong & Lee, 2006).

Low conformity with prescribed medical interventions is an important problem in medical practice and it is associated with considerable medical cost including augmented hospital admissions and unnecessary spending on medication. It also creates a continuous annoyance to health care providers. Communication has been acknowledged as the most imperative factor in determining patients' observance to treatment (Zolnierek, Kelly & DiMatteo, 2009).

Effective communication exerts a positive influence not only on the emotional health of the patient but also on symptom resolution, functional and physiologic status and pain control. Doctors' asking questions about patients' illness experience, understanding the problem, showing feelings and concern, expectation of the therapy and perception of how the problem affects function and letting the patient fully express him or herself is associated with positive health outcomes (Stewart, 1995).

Although much prominence has been put on the importance of effective communication and good doctor patient relationship in impacting patient health outcomes and satisfaction, physician satisfaction has also been linked with good doctor patient communication (Wong & Lee, 2006; Kurtz, 2002). A study conducted by Suchman et al. (1993) in rating the satisfaction of 124 physicians in 550 primary care visits identified that physicians were satisfied when they have a good doctor patient relationship, proficient data collection process, with the suitability of the use of time and with the cooperative, non-demanding nature of the patients.

The above literature clearly indicates the importance of communication in the provision of health care services.

III METHODOLOGY

The researcher followed a descriptive approach in conducting the study. Data were collected from doctors working at various districts and general hospitals in Kerala. A structured questionnaire was administered among a sample of 240 doctors selected with the help of convenience sampling technique. The questions were framed in such a way that the viewpoints of doctors regarding various aspects relating to effectiveness of communication at hospitals like the existence of open communication among doctors, existence of open communication between doctors, nurses and support staff etc. were sought. The collected data was then analyzed using factor analysis. Factor analysis tries to bring inter-correlated variables together under more general, underlying variables. More specifically, the goal of factor analysis is to reduce "the dimensionality of the original space and to give an interpretation to the new space, spanned by a lower number of new dimensions which are supposed to underlie the old ones" (Rietveld & Van Hout, 1993) or to explain the variance in the observed variables in terms of underlying latent factors". In the present paper, factor analysis was done to identify the key variables impacting the effectiveness of communication at government hospitals and to group them into certain factors based on common properties. The factor scores thus obtained were then subjected to multiple regression analysis. Multiple regression is a statistical technique that allows us to predict the value of one variable on the basis of values of several other variables. There will be two set of variables – predictor variables which are helpful in predicting the values of other variables and the criterion variables for which the values are predicted based on the values of predictor variables. This statistical technique can be used while exploring linear relationships between the predictor and criterion variables. Multiple regression analysis helps us to understand the significance level of different dependent variables in relation to one or more independent variables and also to identify the most significant factor(s) [Brace, Kemp & Snelgar, 2003]. In this paper regression analysis was performed to find out whether there existed significant difference in the perception of male and female doctors regarding the existence of effective communication at government hospitals in Kerala. SPSS version 16 was used to analyze the data.

IV RESULTS & DISCUSSION

Table.1
KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.847	
Bartlett's Test of Sphericity	Approx. Chi-Square	697.635
	Df	15
	Sig.	.000

Source: Survey Data

The KMO value varies between 0 and 1. A value of 0 indicates that factor analysis is inappropriate for the data and a value of 1 indicates that factor analysis will yield distinct and reliable results. A value of 0.5 or above means that the sample is adequate and we can proceed with factor analysis whereas if it is below 0.5 we have to collect more data (Field, 2000). As seen from Table 1, the KMO value for our data is 0.847 which means data is adequate and we can go ahead with factor analysis.

For factor analysis to work there has to be some kind of relationship between the variables and this is tested using the Bartlett's Test of sphericity. This test indicates whether factor analysis is appropriate for a given set of data. Factor analysis can be considered appropriate for a data only if the significance value is less than 0.05 (Field, 2000). As the significance value for the present data as shown in Table 1 is 0.000, factor analysis is appropriate for this data.

As the present data set satisfies both KMO test and Bartlett's test, factor analysis is appropriate.

Table.3
Total variance explained

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.538	58.966	58.966	3.538	58.966	58.966	2.986	49.772	49.772
2	1.002	16.694	75.659	1.002	16.694	75.659	1.553	25.888	75.659
3	.488	8.129	83.789						
4	.428	7.133	90.922						
5	.333	5.553	96.475						
6	.212	3.525	100.000						

Extraction Method: Principal Component Analysis.

Source: Survey Data

Table 3 indicates the eigenvalues with respect to each factor before, after extraction and after rotation. Before extraction there were six eigenvalues as there were six attributes included in the analysis. The eigenvalues associated with each factor shows the variance associated with each factor. It also shows eigenvalues in terms of percent of variance. For e.g. the first factor, i.e., 'Existence of open communication among doctors' explains 58.96 percent of variance. It is clear from Table 3 that the first few factors explain relatively larger amount of variation in comparison to the later ones. SPSS then extracts those factors with eigenvalues greater than 1, which leaves us with two factors which are shown in the second part of Table 3 labelled as 'Extraction Sums of Squared Loadings.' The values in this part of the table are the same as the values before extraction except that the values for factors other than those with eigenvalues above 1 are ignored. The last part of the table labelled as 'Rotated Sum of Squared Loadings' shows the eigenvalues after rotation. Rotation more or less optimises the factor structure leading to equalisation importance of all factors. For e.g. before rotation the first factor accounted for 58.96 percent of variance and the second factor accounted for 16.69 percent of variance only whereas after rotation both the factors contributed more or less equally.

Table 4
Rotated component matrix

Variables	Component	
	1	2
Existence of open communication with nurses.	.895	
Existence of open communication among doctors.	.883	
Existence of open communication among nurses.	.848	
Existence of open communication with support staff.	.699	
Existence of a commonly understood sign language to be used in case of emergency.		.924
Existence of common understanding about how to act in the event of an emergency.	.441	.683

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Table. 2
Communalities

Variables	Initial	Extraction
Existence of open communication among doctors.	1.000	.805
Existence of open communication with nurses.	1.000	.824
Existence of open communication among nurses.	1.000	.748
Existence of open communication with support staff.	1.000	.645
Existence of common understanding about how to act in the event of an emergency.	1.000	.661
Existence of a commonly understood sign language to be used in case of emergency.	1.000	.856

Extraction Method: Principal Component Analysis

Source: Survey Data

Table 2 explains the communalities before and after extraction. Principal component analysis works on the assumption that all variance is common. So before extraction all communalities are 1. Column two, i.e., the extraction column indicates the percent of common variance associated with each question. Hence from Table 2 we can say that 80.5 percent of variance associated with the variable 'Existence of open communication among doctors' is common, 82.4 percent of variance associated with the variable 'Existence of open communication with nurses' is common and so on. The table clearly shows the percent of common variance associated with each variable. The highest percent of common variance is in the case of 'Existence of a commonly understood sign language to be used in case of emergency' and lowest in the case of 'Existence of open communication with support staff'.

Rotation converged in 3 iterations

Source: Survey Data

Table 4 shows the rotated component matrix which is the matrix of factor loadings for each factor into each variable. 0.4 was used as the cut-off for factor loading. The factors converged at 3 iterations. The variables are listed in the descending order of size of their factor. As evident from Table 4, factor rotation resulted in the extraction of 2 factors as significant determinants of effectiveness of communication system. Factor 1 loaded across four variables, i.e., 'Existence of open communication with nurses', 'Existence of open communication among doctors', 'Existence of open communication with support staff' which will jointly be termed as '**Openness of communication**'. The Second factor loaded across two variables, i.e., 'Existence of a commonly understood sign language to be used in case of emergency' and 'Existence of common understanding about how to act in the event of an emergency' which will hereafter be referred to as '**Common understanding about emergency communication procedure**'.

Hence, two factors namely '**Openness of communication**' and '**Common understanding about emergency communication procedure**' emerged as the key determinants of effectiveness of communication at government hospitals as perceived by the doctors working there.

The factor scores obtained through factor analysis were subjected to regression analysis by taking respondents' age as the dependent factor at 5 percent significance level to test the following hypotheses.

H1: There is no significant difference in the opinion of doctors across various age groups regarding openness of communication system prevailing at their hospitals.

H2: There is no significant difference in the opinion of doctors across various age groups regarding common understanding about emergency communication procedures at their hospitals.

Table 5
Regression coefficients

	Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.438	.056		43.833	.000
	Openness of communication	.128	.056	.147	2.292	.023
	Common understanding about emergency communication procedure	-.073	.056	-.084	-1.308	.192

Dependent Variable: Respondents' Age

Source: Survey Data

From regression results (Table 5) it was concluded that the second factor emerged after principal component analysis was found to be insignificant. Hence, it was concluded that there was no significant difference in the opinion of doctors belonging to different age group regarding the importance of common understanding about emergency communication procedure at government hospitals. Hence H2 was accepted.

However, from the table, it was concluded that the first factor emerged after principal component analysis namely 'Openness of communication' was significant ($p=.023 < .05$) at 5 percent confidence interval as far as the respondents' age was concerned. Hence, H1 was rejected and it was concluded that there was significant difference in the opinion of respondents belonging to different age groups as far as this factor is considered.

V CONCLUSION

From the above discussion, we can arrive at the conclusion that 'openness of communication', especially between doctors and nurses as well as within doctors and nurses and 'commonly understood emergency communication procedure' are very vital in ensuring communication effectiveness at hospitals. Moreover, while there was a slight difference in opinion of doctors regarding the first factor on the basis of their age, all the respondents had a unanimous view regarding the importance of commonly understood emergency communication procedure. Hence, the authorities concerned should ensure that an environment that encourages open communication among various stakeholders involved in patient care delivery exists at government hospitals in Kerala. They should also establish a properly understood emergency communication procedure to avoid any delay in communication during emergency situations.

VI REFERENCES

1. Amir, A., & Yunus, M. (1999). Doctor-Patient Communication In An Out-Patient Clinic Of A Teaching Hospital. *Indian Journal of Community Medicine*, 24(01), 30.
2. Brace, N., Snelgar, R., & Kemp, R. (2012). *SPSS for Psychologists*. Palgrave Macmillan.
3. Field, A. (2000). *Discovering Statistics using SPSS for Windows* Sage Publications. London, 2, 44-322.
4. Kurtz, S. M. (2002). Doctor-patient communication: principles and practices. *The Canadian Journal of Neurological Sciences*, 29(S2), S23-S29.
5. Rietveld, T., & Van Hout, R. (1993). *Statistical techniques for the study of language and language behaviour*. Walter de Gruyter.
6. Stewart, M. A. (1995). Effective physician-patient communication and health outcomes: a review. *CMAJ: Canadian Medical Association Journal*, 152(9), 1423.
7. Suchman, A. L., Roter, D., Green, M., & Lipkin Jr, M. (1993). Physician satisfaction with primary care office visits. *Medical Care*, 31(12), 1083-1092.
8. Wong, S. Y., & Lee, A. (2006). Communication skills and doctor patient relationship. Department of Community and Family Medicine, The Chinese University of Hong Kong. *Hong Kong Medical Diary*, 11(3).
9. Zolnierok, Kelly. B. H., & DiMatteo, M. R. (2009). Physician communication and patient adherence to treatment: a meta-analysis. *Medical care*, 47(8), 826.